UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,102	10/31/2003	Shuichi Takagi	50T5441.01	2678

27774 7590 07/20/2010

MAYER & WILLIAMS PC
251 NORTH AVENUE WEST
2ND FLOOR
WESTFIELD, NJ 07090

EXAMINER	
LE, MIRANDA	

ART UNIT	PAPER NUMBER
2159	

MAIL DATE	DELIVERY MODE
07/20/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/699,102	TAKAGI ET AL.	
	Examiner	Art Unit	
	MIRANDA LE	2159	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 24-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14, 24-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This communication is responsive to Amendment, filed 04/28/10.

Claims 1-14, 24-27 are pending in this application. This action is made Final.

The objection to claims 2-4 of the invention has been withdrawn in view of the amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8, 10-14, 24, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carmel et al. (US Patent No. 6,389,473), in view of Grambihler

et al. (US Patent No. 6,560,655), and further in view of Miller et al. (US Patent No. 5,920,701).

As to claims 1, 14, Carmel teaches a computer-implemented method for synchronously transferring an amount of local data from a local data storage *(i.e. computer 34, Figs. 2, 4; the transmitting computer, col. 2, lines 51-59)* medium to a remote data storage *(i.e. Server 36, computers 30, Figs. 2, 4; clients, col. 2, lines 51-50)* medium via a communications link having an available bandwidth *(i.e. Preferably, computer 34 monitors the rate of data being transmitted over each of links 60, 62, 64, etc., and allocates files 42, 44, 46, 48, etc., according to the data rates. The sizes of the files may be varied by adjusting slice durations T.sub.1, T.sub.2, T.sub.3, etc., and a relatively greater volume of data may be transmitted through links exhibiting relatively greater data rates. The bandwidth open for transmission between computer 34 and server 36 is effectively roughly equal to a sum of the bandwidths of the plurality of open links. The number of links that are actually opened between computer 34 and server 36 may be less than or greater than the five links shown in the example of FIG. 4, depending on the available data rates of the open links, compared with the rate of data in stream 40. Preferably at least two links are opened, so that preparation and transmission of files 42, 44, 46, 48, etc., may be toggled back and forth between the links. A similar technique is preferably employed by clients 30, col. 9, lines 31-48)*, the local data storage medium associated with a local computer system having a local processor sequentially responsive to a plurality of local computer programs, the remote

data storage medium associated with a remote computer system non-redundant of the local computer system and having a remote processor, the method comprising:

evaluating local user *(i.e. transmitting computer, col. 2, lines 51-59)* conditions *(i.e. the rate of data being transmitted over each of links 60, 62, 64, col. 9, lines 31-48; link 60 will have timed out, col. 12, lines 48-59)* associated with transfer of the local data *(i.e. the transmitting computer and the clients monitor the uploading and downloading of data to and from the server, respectively, in order to determine the amount of time required to convey each slice and to verify that the slices are conveyed at a sufficient rate. When the data stream comprises multimedia data, the data rate should be generally equal to or faster than the rate at which the data are generated at the transmitting computer, col. 2, lines 51-59);*

based on the currently available bandwidth *(i.e. data rate, col. 5, lines 3-14; the available data rates of the open links, col. 9, lines 31-48)* and the amount of local data *(i.e. The sizes of the files, col. 9, lines 31-49),* approximating a transfer time *(i.e. On the other hand, if it is determined that the upload time for file 42 (or a subsequent file) is substantially shorter than duration T.sub.1, the duration of subsequent files may be extended, and/or the compression ratio may be decreased, so as to take better advantage of the available bandwidth, col. 12, lines 14-17)* for the local data *(i.e. the transmitting computer opens a plurality of links between the transmitting computer and the server, each link characterized by a respective data rate, and transmits different ones of the sequence of files over different ones of the plurality of links. Most preferably, the transmitting computer opens the plurality of links such that the data rates of the links*

taken together are sufficient to upload the sequence at the upload rate generally equal to the data rate. Further preferably, the transmitting computer monitors the data rates of the links and opens a new link in place of one of the links whose data rate is lower than a predetermined level, col. 5, lines 3-14);

determining a status of the local processor *(i.e. Preferably, computer 34 monitors the rate of data being transmitted over each of links 60, 62, 64, etc., and allocates files 42, 44, 46, 48, etc., according to the data rates. The sizes of the files may be varied by adjusting slice durations T1, T2, T3, etc., and a relatively greater volume of data may be transmitted through links exhibiting relatively greater data rates, col. 9, lines 31-49)*, wherein the determining step includes determining if the local processor has reduced activity *(i.e. link 60 will have timed out, col. 12, lines 48-59)* or is idle *(i.e. If link 60 has not completed transmission of file 42 by the time the sixth file is ready for transmission, link 60 will have timed out, and a time-out indication will be received from step 88 (FIG. 5). In this case, link 60 is terminated and is replaced by link 70. Preferably, a "socket" opened for link 60 by a WINSOCK program running on computer 34 is simply reinitialized to open link 70. Optionally, file 42 is retransmitted over link 70 or over one of the other links, although in the case of a live broadcast transmission, it may be preferable simply to drop the file rather than send it after such a long delay, col. 12, lines 48-58)*;

based on the approximated transfer time *(i.e. the time required to upload file 42 is measured and compared to T.sub.1, at the same time as file 44 (slice 2) is being encoded and prepared, col. 11, lines 65 to col. 12, line 12)*, the local user conditions,

and the status of the local processor, selecting a time of day at which *(i.e. stream in real time, col. 2, line 60 to col. 3, line 5)* to transmit the local data to the remote data storage medium *(i.e. Computer 34 monitors the time codes as file 40 is transmitted, and clients 30 similarly monitor the time codes as the file is received, in order to ensure that the transmission or reception is "keeping up" with the input of the data to the computer. In the event that a lag is detected, steps are taken to increase the data transmission or reception rate, as described further hereinbelow. For example, as shown in FIG. 3A, time intervals T1, T2, T3, etc., are not all equal, but rather are adjusted by computer 34 in response to the transmission rate. Alternatively or additionally, the compression level of the data is varied, as is likewise described below, so as to adjust the data streaming rate to the available bandwidth over one or more channels between computer 34 and server 36, and/or between server 36 and client 30, col. 7, lines 35-49)*; and

automatically arranging transfer of the local data to the remote data storage medium via the communications link at the selected time *(i.e. Computer 34 monitors the time codes as file 40 is transmitted, and clients 30 similarly monitor the time codes as the file is received, in order to ensure that the transmission or reception is "keeping up" with the input of the data to the computer. In the event that a lag is detected, steps are taken to increase the data transmission or reception rate, as described further hereinbelow. For example, as shown in FIG. 3A, time intervals T.sub.1, T.sub.2, T.sub.3, etc., are not all equal, but rather are adjusted by computer 34 in response to the transmission rate. Alternatively or additionally, the compression level of the data is varied, as is likewise described below, so as to adjust the data streaming rate to the*

available bandwidth over one or more channels between computer 34 and server 36, and/or between server 36 and client 30, col. 7, lines 35-49).

Carmel implicitly teaches evaluating local user conditions associated with transfer of the local data as The client or the server monitors the data transfer rate of a data link opened therebetween and selects the level that is appropriate to the link bandwidth *(i.e. In other preferred embodiments, the slices are provided by the server at multiple resolution or quality levels. Each such level has a different degree of data compression, and thus corresponds to a different data bandwidth requirement. The client or the server monitors the data transfer rate of a data link opened therebetween and selects the level that is appropriate to the link bandwidth. If the monitored data transfer rate changes during transmission, the quality level is preferably reselected accordingly, col. 3, lines 5-13).*

Carmel does not specifically state the term "evaluating local user conditions associated with transfer of the local data".

Grambihler teaches this limitation *(i.e. The synchronization manager 60 may support user-scheduled automatic synchronizations, by providing a schedule dialog and wizard 64 (FIG. 2) that include user dialogs for showing and configuring logon synchronization preferences, logoff synchronization preferences, idle synchronization preferences and scheduled synchronizations. By way of example, a particular user may schedule an automatic synchronization of local and remote electronic mail messages on each logon, schedule an automatic synchronization of local files with network database files every Thursday at 11:00 PM, and schedule a synchronization of subscriptions*

during idle times. A set of interfaces may also be provided whereby handlers can set up schedules outside of the user interface of the synchronization manager 60, col. 9, lines 34-38).

It would have been obvious to one of ordinary skill of the art having the teaching of Carmel and Grambihler at the time the invention was made to modify the system of Carmel to include the limitations as taught by Grambihler. One of ordinary skill in the art would be motivated to make this combination in order to provide a schedule dialog and wizard that include user dialogs for showing and configuring logon synchronization preferences, logoff synchronization preferences, idle synchronization preferences and scheduled synchronizations in view of Grambihler, as doing so would give the added benefit of providing an improved method and system for managing the synchronization of local and remote data by multiple applications and system components as taught by Grambihler (See TECHNICAL FIELD).

Carmel implicitly teaches a time of day at which as in real time *(i.e. stream in real time, col. 2, line 60 to col. 3, line 5)*.

Carmel, Grambihler do not explicitly teach "selecting a time based on bandwidth".

Miller teaches this limitation in Fig. 7 and Table in column 7.

It would have been obvious to one of ordinary skill of the art having the teaching of Carmel, Grambihler and Miller at the time the invention was made to modify the system of Carmel, Grambihler to include the limitations as taught by Miller. One of ordinary skill in the art would be motivated to make this combination in order to schedule for data transmission from the content sources to the replicated servers in

view of Miller (col. 6, lines 8-34), as doing so would give the added benefit of managing how the content can be distributed by many content providers so that the distributions do not overwhelm network bandwidth, and how can multicast addresses be allocated without conflict among the various content sources as taught by Miller (col. 1, lines 20-49).

As per claim 2, Carmel teaches a computer-readable medium encoded with a program which, when loaded into a processor, implements the method of claim 1 *(See Figs. 2, 4)*.

As per claim 3, Carmel teaches the computer-readable storage medium according to claim 2, wherein the computer program comprises one of the plurality of local computer-program, and the processor comprise the local processor *(See Figs. 2, 4)*.

As per claim 4, Carmel teaches the computer-readable storage medium according to claim 2, wherein the processor comprises the remote processor *(See Figs. 2, 4)*.

As per claim 5, Carmel teaches the computer-implemeted method according to claim 1, further comprising: automatically transmitting the local data to the remote data storage medium at the selected time *(i.e. Computer 34 monitors the time codes as file*

40 is transmitted, and clients 30 similarly monitor the time codes as the file is received, in order to ensure that the transmission or reception is "keeping up" with the input of the data to the computer. In the event that a lag is detected, steps are taken to increase the data transmission or reception rate, as described further hereinbelow. For example, as shown in FIG. 3A, time intervals T.sub.1, T.sub.2, T.sub.3, etc., are not all equal, but rather are adjusted by computer 34 in response to the transmission rate. Alternatively or additionally, the compression level of the data is varied, as is likewise described below, so as to adjust the data streaming rate to the available bandwidth over one or more channels between computer 34 and server 36, and/or between server 36 and client 30, col. 7, lines 35-49).

As per claim 6, Carmel teaches the computer-implemented method according to claim 1, further comprising: automatically arranging for interruption of transfer of the local data bases on the status of the local processor *(i.e. Computer 34 monitors the time codes as file 40 is transmitted, and clients 30 similarly monitor the time codes as the file is received, in order to ensure that the transmission or reception is "keeping up" with the input of the data to the computer. In the event that a lag is detected, steps are taken to increase the data transmission or reception rate, as described further hereinbelow. For example, as shown in FIG. 3A, time intervals T.sub.1, T.sub.2, T.sub.3, etc., are not all equal, but rather are adjusted by computer 34 in response to the transmission rate. Alternatively or additionally, the compression level of the data is varied, as is likewise described below, so as to adjust the data streaming rate to the available bandwidth over*

one or more channels between computer 34 and server 36, and/or between server 36 and client 30, col. 7, lines 35-49).

As per claim 7, Carmel teaches the computer-implemented method according to claim 6, further comprising: automatically interrupting transfer of the local data based on the status of the local processor *(i.e. If link 60 has not completed transmission of file 42 by the time the sixth file is ready for transmission, link 60 will have timed out, and a time-out indication will be received from step 88 (FIG. 5). In this case, link 60 is terminated and is replaced by link 70. Preferably, a "socket" opened for link 60 by a WINSOCK program running on computer 34 is simply reinitialized to open link 70. Optionally, file 42 is retransmitted over link 70 or over one of the other links, although in the case of a live broadcast transmission, it may be preferable simply to drop the file rather than send it after such a long delay, col. 12, lines 48-58)*.

As per claim 8, Carmel teaches the computer-implemented method according to claim 6, wherein the status of the local processor is inferred from one of: status of a display device, a status of a memory; a configured processor utilization; and a time since a last interactive use of the local computer system *(i.e. If link 60 has not completed transmission of file 42 by the time the sixth file is ready for transmission, link 60 will have timed out, and a time-out indication will be received from step 88 (FIG. 5). In this case, link 60 is terminated and is replaced by link 70. Preferably, a "socket" opened for link 60 by a WINSOCK program running on computer 34 is simply*

reinitialized to open link 70. Optionally, file 42 is retransmitted over link 70 or over one of the other links, although in the case of a live broadcast transmission, it may be preferable simply to drop the file rather than send it after such a long delay, col. 12, lines 48-58).

As per claim 10, Carmel teaches the computer-implemented method according to claim 6, further comprising: after automatically arranging for interruption of transfer of the local data, automatically arranging for resumption of transfer of the local data based on the status of the local processor *(i.e. If link 60 has not completed transmission of file 42 by the time the sixth file is ready for transmission, link 60 will have timed out, and a time-out indication will be received from step 88 (FIG. 5). In this case, link 60 is terminated and is replaced by link 70. Preferably, a "socket" opened for link 60 by a WINSOCK program running on computer 34 is simply reinitialized to open link 70. Optionally, file 42 is retransmitted over link 70 or over one of the other links, although in the case of a live broadcast transmission, it may be preferable simply to drop the file rather than send it after such a long delay, col. 12, lines 48-58).*

As per claim 11, Carmel teaches the computer-implemented method according to claim 10, further comprising: automatically resuming transfer of the local data based on the status of the local processor *(i.e. If link 60 has not completed transmission of file 42 by the time the sixth file is ready for transmission, link 60 will have timed out, and a time-out indication will be received from step 88 (FIG. 5). In this case, link 60 is*

terminated and is replaced by link 70. Preferably, a "socket" opened for link 60 by a WINSOCK program running on computer 34 is simply reinitialized to open link 70. Optionally, file 42 is retransmitted over link 70 or over one of the other links, although in the case of a live broadcast transmission, it may be preferable simply to drop the file rather than send it after such a long delay, col. 12, lines 48-58).

As per claim 12, Carmel teaches the computer-implemented method according to claim 1, wherein the local user conditions comprise one of: a location of the local data; a preferred transfer time; a file extension associated with the local data; and a status of the communication link *(i.e. the rate of data being transmitted over each of links 60, 62, 64, col. 9, lines 31-48; link 60 will have timed out, col. 12, lines 48-59)*.

As per claim 13, Carmel teaches the computer-implemented method according to claim 1, wherein the remote processor and the local processor are under independent control *(See Figs. 2, 4)*.

As per claim 24, Carmel teaches the computer-implemented method according to claim 1, wherein the status is determined by direct monitoring of the local processor *(i.e. Preferably, computer 34 monitors the rate of data being transmitted over each of links 60, 62, 64, etc., and allocates files 42, 44, 46, 48, etc., according to the data rates. The sizes of the files may be varied by adjusting slice durations T1, T2, T3, etc., and a*

relatively greater volume of data may be transmitted through links exhibiting relatively greater data rates, col. 9, lines 31-49).

As per claim 25, Carmel teaches the computer-implemented method according to claim 1, wherein the status is inferred by monitoring a status of other programs associated with the local computer-system *(i.e. If link 60 has not completed transmission of file 42 by the time the sixth file is ready for transmission, link 60 will have timed out, and a time-out indication will be received from step 88 (FIG. 5). In this case, link 60 is terminated and is replaced by link 70. Preferably, a "socket" opened for link 60 by a WINSOCK program running on computer 34 is simply reinitialized to open link 70. Optionally, file 42 is retransmitted over link 70 or over one of the other links, although in the case of a live broadcast transmission, it may be preferable simply to drop the file rather than send it after such a long delay, col. 12, lines 48-58).*

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carmel et al. (US Patent No. 6,389,473), in view of Grambihler et al. (US Patent No. 6,560,655), and Miller et al. (US Patent No. 5,920,701), as applied to claims above, and further in view of Roberts et al. (US Patent No. 6,920,110).

As per claim 9, Carmel implicitly teaches the status of the display device comprises activation of a screen-saver as link 60 will have timed out, col. 12, lines 48-59.

Miller implicitly teaches the status of the display device comprises activation of a screen-saver as if the transmission was unsuccessful, col. 3, lines 1-23.

Grambihler implicitly teaches the status of the display device comprises activation of a screen-saver as idle in col. 9, lines 34-38.

Carmel, Grambihler, Miller do not clearly state the term “screen saver”.

Roberts teaches this limitation *(i.e. The relatively low level of actual network bandwidth utilization shown from T.sub.5 through T.sub.8 (FIG. 4) is sometimes referred to as "network idle." This concept differs from "machine idle," which occurs when a PC user is not currently using the keyboard or mouse. If the machine remains idle for a period of time, a screen saver may be invoked, col. 7, line 59 to col. 8, line 12)*.

It would have been obvious to one of ordinary skill of the art having the teaching of Carmel, Grambihler, Miller, Roberts at the time the invention was made to modify the system of Carmel, Grambihler, Miller to include the limitations as taught by Roberts. One of ordinary skill in the art would be motivated to make this combination in order to the transfer of a set of data over a network at a time when the network utilization is relatively low in view of Roberts (col. 7, line 59 to col. 8, line 12), as doing so would give the added benefit of maintaining equally applicable to uploads from the client to the server or other communication of data between computers as taught by Roberts (col. 7, line 59 to col. 8, line 12).

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carmel et al. (US Patent No. 6,389,473), in view of Grambihler et al. (US Patent No. 6,560,655), and Miller et al. (US Patent No. 5,920,701), as applied to claims above, and further in view of Knox et al. (US Pub No. 20020083124).

As per claim 26, Miller implicitly teaches the file extension as criterion, col. 6, lines 52-59 *(i.e. The priority level for each content source 12, 14 is assigned based on some criterion. For example, certain content sources 12, 14 may be charged a greater fee by the scheduler 10, in return for being accorded a higher priority in the distribution of content data over the network. These priorities can be stored in memory 32 in the scheduler 10 to be factored into the calculation of transmission parameters for each content source 12, 14 transmission, col. 6, lines 52-59)*.

Carmel, Grambihler, Miller do not specifically state the term "file extension".

Knox teaches the computer-implemented method according to claim 1, wherein the local user conditions comprise file extensions of the local data *(i.e. In this step, the process 40 can execute a computer process that is capable of analyzing the contents of the uploaded data file. For example, the file structure of the uploaded data file may be known to the process and may be identified to that process by the file extension associate with the uploaded file. For example, a *.rm file indicates a file format compatible with the Real Media file structure. The process 40 can include logic that understands the file structure of the *.rm format. The file structure typically includes information regarding the title of the file, the size of the file, an associated codec, bit rate and other characteristics of that file, [0043])*.

It would have been obvious to one of ordinary skill of the art having the teaching of Carmel, Grambihler, Miller, Knox at the time the invention was made to modify the system of Carmel, Grambihler, Miller to include the limitations as taught by Knox. One of ordinary skill in the art would be motivated to make this combination in order to

analyze the contents of the uploaded data file in view of Knox ([0043]), as doing so would give the added benefit of allowing the user to set or adjust meta-data characteristics of the uploaded media asset, and a distribution process is capable of replicating the media asset and distributing the replicated versions of that asset across the data network as taught by Knox (Abstract).

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carmel et al. (US Patent No. 6,389,473), in view of Grambihler et al. (US Patent No. 6,560,655), and Miller et al. (US Patent No. 5,920,701), as applied to claims above, and further in view of of Quinet et al. (US Pub No. 20050240940).

As per claim 27, Miller implicitly teaches local data having a first file extension is transferred immediately and wherein local data having a second file extension is transferred at a later time of day as The priority level for each content source 12, 14 is assigned based on some criterion, col. 6, lines 52-59 *(i.e. The priority level for each content source 12, 14 is assigned based on some criterion. For example, certain content sources 12, 14 may be charged a greater fee by the scheduler 10, in return for being accorded a higher priority in the distribution of content data over the network. These priorities can be stored in memory 32 in the scheduler 10 to be factored into the calculation of transmission parameters for each content source 12, 14 transmission, col. 6, lines 52-59)*.

Carmel, Grambihler, Miller, Knox do not clearly state this limitation.

Quinet teaches the computer-implemented method according to claim 26,

wherein local data having a first file extension is transferred immediately and wherein local data having a second file extension is transferred at a later time of day *(i.e. [0065] The object does not have a priority yet, but the file extension looks like HTML (".HTML",".HTM") or XML (".XML") or looks like a directory index (ends"/"). Such a priority assignment ensures that a HTML page requested from the bookmarks or typed in directly will be requested with a high priority)*.

It would have been obvious to one of ordinary skill of the art having the teaching of Carmel, Grambihler, Miller, Knox, Quinet at the time the invention was made to modify the system of Carmel, Grambihler, Miller, Knox to include the limitations as taught by Quinet. One of ordinary skill in the art would be motivated to make this combination in order to assign an initial priority to an requested object in view of Quinet (Abstract), as doing so would give the added benefit of controlling in a communications network an object transfer from a first network component via the intermediate component to a second network component as taught by Quinet (Abstract).

Response to Arguments

Applicant's arguments filed 10/08/09 have been fully considered but they are not persuasive as for the following reasons:

A. Camel read on claimed limitations as follows:

1. Transferring an amount of local data from a local data storage medium to a remote data storage via a communications link having an available bandwidth.

Local data storage limitation equates to transmitting computer; the clients of Camel, col. 2, lines 1-21; col. 2, lines 52-59 *(i.e. The transmitting computer uploads the sequence of slices to the server substantially in real time, col. 2, lines 1-21; the transmitting computer and the clients monitor the uploading and downloading of data to and from the server, respectively, in order to determine the amount of time required to convey each slice and to verify that the slices are conveyed at a sufficient rate. When the data stream comprises multimedia data, the data rate should be generally equal to or faster than the rate at which the data are generated at the transmitting computer, See Camel, col. 2, lines 51-59).*

Remote data storage limitation equates to the server of Camel, col. 2, line, lines 52-59 *(i.e. the transmitting computer and the clients monitor the uploading and downloading of data to and from the server, respectively, in order to determine the amount of time required to convey each slice and to verify that the slices are conveyed at a sufficient rate. When the data stream comprises multimedia data, the data rate should be generally equal to or faster than the rate at which the data are generated at the transmitting computer, See Camel, col. 2, lines 51-59).*

Transferring from a local data storage medium to a remote data storage limitation equates to the transmitting computer and the clients monitor the uploading and downloading of data to and from the server of Camel, col. 2, lines 52-59 *(i.e. the transmitting computer and the clients monitor the uploading and downloading of data to and from the server, respectively, in order to determine the amount of time required to convey each slice and to verify that the slices are conveyed at a sufficient rate. When*

the data stream comprises multimedia data, the data rate should be generally equal to or faster than the rate at which the data are generated at the transmitting computer, See Camel, col. 2, lines 51-59).

A communications link having an available bandwidth limitation equates to the data rate of Camel, col. 2, lines 52-59 *(i.e. the transmitting computer and the clients monitor the uploading and downloading of data to and from the server, respectively, in order to determine the amount of time required to convey each slice and to verify that the slices are conveyed at a sufficient rate. When the data stream comprises multimedia data, the data rate should be generally equal to or faster than the rate at which the data are generated at the transmitting computer, See Camel, col. 2, lines 51-59).*

2. Evaluating local user conditions associated with transfer of the local data.

Camel implicitly teaches **"evaluating"** as determine the amount of time of Camel, col. 2, lines 52-59 *(i.e. the transmitting computer and the clients monitor the uploading and downloading of data to and from the server, respectively, in order to determine the amount of time required to convey each slice and to verify that the slices are conveyed at a sufficient rate. When the data stream comprises multimedia data, the data rate should be generally equal to or faster than the rate at which the data are generated at the transmitting computer, See Camel, col. 2, lines 51-59).*

Takeuchi teaches evaluating *(i.e. Immediately before performing the relay process for the control message, the information relay device calculates the CPU time*

necessary for data relay from the packet size and transfer rate stored in the control message and the CPU time declared when the external interface is called and reserves the calculated CPU time, See Takeuchi, col. 4, lines 36-49).

Local user conditions associated with transfer of the local data limitation equates to a data stream having a given data rate of Camel, col. 2, lines 52-59 *(i.e. providing at the transmitting computer a data stream having a given data rate; dividing the stream into a sequence of slices, each slice having a predetermined data size associated therewith; encoding the slices in a corresponding sequence of files, each file having a respective index; and uploading the sequence to a server at an upload rate generally equal to the data rate of the stream, such that the one or more client computers can download the sequence over the network from the server at a download rate generally equal to the data rate, See Camel, col. 3, lines 29-39).*

Local user conditions limitation equates to a given data rate of Camel, col. 2, lines 52-59 *(i.e. providing at the transmitting computer a data stream having a given data rate; dividing the stream into a sequence of slices, each slice having a predetermined data size associated therewith; encoding the slices in a corresponding sequence of files, each file having a respective index; and uploading the sequence to a server at an upload rate generally equal to the data rate of the stream, such that the one or more client computers can download the sequence over the network from the server at a download rate generally equal to the data rate, See Camel, col. 3, lines 29-39).*

The local data limitation equates to a data stream of Camel, col. 2, lines 52-59 *(i.e. providing at the transmitting computer a data stream having a given data rate;*

dividing the stream into a sequence of slices, each slice having a predetermined data size associated therewith; encoding the slices in a corresponding sequence of files, each file having a respective index; and uploading the sequence to a server at an upload rate generally equal to the data rate of the stream, such that the one or more client computers can download the sequence over the network from the server at a download rate generally equal to the data rate, See Camel, col. 3, lines 29-39).

3. The currently available bandwidth and the amount of local data, approximating a transfer time.

The currently available bandwidth limitation equates to each link characterized by a respective data rate of Camel, col. 5, lines 3-14 *(i.e. the transmitting computer opens a plurality of links between the transmitting computer and the server, each link characterized by a respective data rate, and transmits different ones of the sequence of files over different ones of the plurality of links. Most preferably, the transmitting computer opens the plurality of links such that the data rates of the links taken together are sufficient to upload the sequence at the upload rate generally equal to the data rate. Further preferably, the transmitting computer monitors the data rates of the links and opens a new link in place of one of the links whose data rate is lower than a predetermined level, See Camel, col. 5, lines 3-14).*

Approximating a transfer time limitation equates to the amount of time of Camel, col. 2, lines 52-59 *(i.e. the transmitting computer and the clients monitor the uploading and downloading of data to and from the server, respectively, in order to*

determine the amount of time required to convey each slice and to verify that the slices are conveyed at a sufficient rate. When the data stream comprises multimedia data, the data rate should be generally equal to or faster than the rate at which the data are generated at the transmitting computer, See Camel, col. 2, lines 51-59).

The amount of local data limitation equates to data size of Camel, col. 2, lines 52-59 *(i.e. providing at the transmitting computer a data stream having a given data rate; dividing the stream into a sequence of slices, each slice having a predetermined data size associated therewith; encoding the slices in a corresponding sequence of files, each file having a respective index; and uploading the sequence to a server at an upload rate generally equal to the data rate of the stream, such that the one or more client computers can download the sequence over the network from the server at a download rate generally equal to the data rate, See Camel, col. 3, lines 29-39).*

4. Determining a status of the local processor, wherein the determining step includes determining if the local processor has reduced activity or is idle.

A status of the local processor has reduced activity limitation equates to the upload rate of Camel, col. 4, line 63 to col. 5, line 2 *(i.e. the transmitting computer compares the upload rate to the data rate and adjusts the upload rate responsive to the comparison. Most preferably, the transmitting computer compresses the data at a compression ratio which is varied responsive to the comparison. Additionally or alternatively, the transmitting computer adjusts the size of one or more of the slices responsive to the comparison, See Camel, col. 4, line 63 to col. 5, line 2).*

5. Selecting a time of day.

A time limitation equates to substantially in real time of Camel, col. 2, lines 1-21 *(i.e. The transmitting computer uploads the sequence of slices to the server substantially in real time, col. 2, lines 1-21).*

Camel implicitly teaches "a time of day" as substantially in real time *(i.e. The transmitting computer uploads the sequence of slices to the server substantially in real time, See Camel, col. 2, lines 1-21).*

The step of selecting limitation equates to substantially in real time of Camel, col. 2, lines 1-21 *(i.e. The transmitting computer uploads the sequence of slices to the server substantially in real time, See Camel, col. 2, lines 1-21).*

However, Miller teaches the term "**a time of day**" limitation as the times of day of Miller in col. 8, lines 18-33; and col. 7, Table 1 *(i.e. After obtaining the delivery factor, control is then routed to step 212, and the scheduler 10 determines the bandwidth of the pathway through the network 24 at the times of day corresponding to the available transmission times of each content source 12, 14. The pathway bandwidth is typically the total network bandwidth over the predetermined period. The scheduler 10 then determines, in step 214, the percentage of the total network bandwidth that is allocated to content data transfer at the times of day corresponding to the available transmission times. Referring again to the above example relating to USA Today, the scheduler obtains from a main memory 32, or a network manager located on the network 24, the percentage of bandwidth allocated to content data transfer from the time transmission is*

to commence, 10:00 PM, until the time that delivery is to be completed, 7:30 AM, See Miller, col. 8, lines 18-33)

The step of selecting limitation equates to 7:00 AM, 7:15 AM, and 7:30 AM of Miller, col. 7, line 49 to col. 8, line 17 *(i.e. After obtaining a proportional bandwidth factor for all of the content sources 12, 14, control is routed to step 210, and the scheduler determines a delivery factor for each content source 12, 14. The delivery factor is basically a time factor. The scheduler 10 determines for each content source 12, 14, an available transmission time, which is a time interval starting with the time that transmission is to commence and ending with the requested delivery time. The scheduler then determines the mean of the available transmission times of all the content sources 12, 14. The delivery factor is thus determined for each content source 12, 14, by the ratio of the mean available transmission time to its available transmission time. Referring again to Table 1, for example, USA Today requests delivery of content data by 7:30* ***AM. Note that the desired*** *delivery time for other high priority content sources, such as The Wall Street Journal, Barrons, and Time are as follows: 7:00 AM, 7:15 AM, and 7:30 AM, respectively., See Miller, col. 7, line 49 to col. 8, line 17).*

B. Miller read on claimed limitations as follows:

1. Transferring an amount of local data from a local data storage medium to a remote data storage via a communications link having an available bandwidth.

Local data storage limitation equates to content sources 12, 14 of Miller, col. 4, lines 34-59.

Remote data storage limitation equates to servers 16, 18, 20 of Miller, col. 4, lines 34-59.

Transferring from a local data storage medium to a remote data storage limitation equates to transmission from the content sources 12, 14 to one or more replicated servers 16, 18, 20 of Miller *(i.e. Referring to FIG. 1, in accordance with the invention, a network resource scheduler 10 (hereinafter "scheduler") communicates with a plurality of content sources 12, 14 over a communications network 24 and schedules data transmission from the content sources 12, 14 to one or more replicated servers 16, 18, 20, See Miller, col. 4, lines 34-59).*

A communications link having an available bandwidth limitation equates to the bandwidth available for data transmission over the communications network 24 of Miller, col. 4, lines 34-59.

2. Evaluating local user conditions associated with transfer of the local data.

The term "evaluating" limitation equates to determination of Miller, col. 4, lines 34-59 *(i.e. the scheduler 10 makes the transmission determination based on such parameters as the bandwidth available for data transmission over the communications network 24, the time available for transmission to be completed by the requested delivery time, the amount or size of the data to be delivered by the requested delivery time, the availability of multicast addresses, and the transmission priority levels accorded to the content sources 12, 14, See Miller, col. 4, lines 34-59).*

Local user conditions associated with transfer of the local data limitation equates to bandwidth; the time available; the amount or size of the data; the availability of multicast addresses; the transmission priority levels of Miller, col. 4, lines 34-59 the amount or size of the data *(i.e. the scheduler 10 makes the transmission determination based on such parameters as the bandwidth available for data transmission over the communications network 24, the time available for transmission to be completed by the requested delivery time, the amount or size of the data to be delivered by the requested delivery time, the availability of multicast addresses, and the transmission priority levels accorded to the content sources 12, 14, See Miller, col. 4, lines 34-59)*.

3. The currently available bandwidth and the amount of local data, approximating a transfer time.

The currently available bandwidth limitation limitation equates to the bandwidth available for data transmission over the communications network 24 of Miller, col. 4, lines 34-59.

Approximating a transfer time limitation limitation equates to the time available for transmission to be completed of Miller, col. 4, lines 34-59.

The amount of local data limitation limitation equates to the amount or size of the data of Miller, col. 4, lines 34-59.

4. Determining a status of the local processor, wherein the determining step includes determining if the local processor has reduced activity or is idle.

A status of the local processor has reduced activity limitation equates to the decrease in the percentage of available bandwidth to 30% of Miller, col. 8, line 64 to col. 9, line 15 *(i.e. Control is then routed to step 218 and the scheduler 10 determines the transfer rate for each content source 12, 14 by multiplying each actual bandwidth obtained for the available transmission time, by the proportional bandwidth factor and the delivery factor. Referring again to FIG. 7 and the examples above relating to USA Today, the data transfer rate during 10:00 PM and 6:00 AM would be calculated by the scheduler 10 by multiplying 926.4 Kbps, by a proportional bandwidth factor of 0.067 and a delivery factor of 0.97, to obtain 60.2 Kbps. Given that the data transferred by USA Today is to be delivered by 7:30 AM, a different transfer rate will apply between 6:00 AM and 7:30 AM due to the decrease in the percentage of available bandwidth to 30%, occurring at 6:00 AM. The actual bandwidth during this time period is calculated by multiplying 1.544 Mbps by 0.3, which is, 463.2 Kbps. The transfer rate during this time period is thus calculated by multiplying 463.2 by 0.067 and 0.97, which is 30.1 Kbps. Thus, it is clear that the transfer rate decreases as the percentage of bandwidth allocated to content data transfer decreases, col. 8, lines 64 to col. 9, line 15).*

5. Selecting a time of day.

"**A time of day**" limitation equates to the times of day of Miller in col. 8, lines 18-33; and col. 7, Table 1 *(i.e. After obtaining the delivery factor, control is then routed to step 212, and the scheduler 10 determines the bandwidth of the pathway through the network 24 at the times of day corresponding to the available transmission times of*

each content source 12, 14. The pathway bandwidth is typically the total network bandwidth over the predetermined period. The scheduler 10 then determines, in step 214, the percentage of the total network bandwidth that is allocated to content data transfer at the times of day corresponding to the available transmission times. Referring again to the above example relating to USA Today, the scheduler obtains from a main memory 32, or a network manager located on the network 24, the percentage of bandwidth allocated to content data transfer from the time transmission is to commence, 10:00 PM, until the time that delivery is to be completed, 7:30 AM, See Miller, col. 8, lines 18-33).

The step of selecting limitation equates to 7:00 AM, 7:15 AM, and 7:30 AM of Miller, col. 7, line 49 to col. 8, line 17 *(i.e. After obtaining a proportional bandwidth factor for all of the content sources 12, 14, control is routed to step 210, and the scheduler determines a delivery factor for each content source 12, 14. The delivery factor is basically a time factor. The scheduler 10 determines for each content source 12, 14, an available transmission time, which is a time interval starting with the time that transmission is to commence and ending with the requested delivery time. The scheduler then determines the mean of the available transmission times of all the content sources 12, 14. The delivery factor is thus determined for each content source 12, 14, by the ratio of the mean available transmission time to its available transmission time. Referring again to Table 1, for example, USA Today requests delivery of content data by 7:30 AM. Note that the desired delivery time for other high priority content sources, such as The Wall Street Journal, Barrons, and Time are as follows: 7:00 AM,*

7:15 AM, and 7:30 AM, respectively. Assuming that transmission is to commence at 10:00 PM of the prior day, the available transmission time for USA Today, is thus 8.5 hours, as that is the amount of time between the time transmission begins, 10 PM until the desired delivery time, 7:30 AM. Referring still to Table 1, note that for The Wall Street Journal, there are 8 hours, for Barrons there are 8.25 hours, and for the Time there are 8.5 hours. Taking the mean of each hour value for the above-noted content sources, we obtain 8.31 hours. Thus, the delivery factor for USA Today is 8.31/8.5, or 0.97. The Wall Street Journal will have a larger delivery factor, given that there is less time during which delivery can be completed by the desired delivery time, that is, 8 hours, as compared to 8.5 hours available for the content source, USA Today. The delivery factor for The Wall Street Journal is thus 8.31/8 or 1.03. The larger the delivery factor, the greater the bandwidth to be accorded to that particular content source to achieve completion of transmission by its earlier delivery time, See Miller, col. 7, line 49 to col. 8, line 17).

Selecting a time of day limitation further equates to The scheduler determines at least a start time of Miller, See Abstract, and col. 10, lines 1-19, See Table 1 col. 7 *(i.e. the start time can be determined per content source, by subtracting from the desired delivery time, the total transmission time determined in step 224. For purposes of discussion however, the predetermined start time will be the same for each of the content sources, provided that they have placed a request by a certain time. For example, referring to FIG. 7, above, all requests are placed by 9:45 PM in order to be scheduled for transmission at 10:00 PM. Once the start time is determined and stored in*

memory 32 with the above-stored parameters, the distribution schedule for each content source 12, 14 is generally complete, See Miller, col. 10, lines 1-19).

C. The local user condition.

The local user condition associated with transfer of the local data stated in [0029] of the instant specification as:

The **local user conditions** associated with selection of user data such as **where the data is located**; **file extensions** associated with the data; **times**, or events, which would trigger transfer of the data; ... the user request that user data having file extensions such as .DOC or .JPG be **transferred immediately**, while user data 25 have file extensions such as .MPG or .RM be **transferred overnight**.

Where data is located of Applicants equates to the content sources 12, 14 of Miller, col. 4, lines 34-59 *(i.e. Referring to FIG. 1, in accordance with the invention, a network resource scheduler 10 (hereinafter "scheduler") communicates with a plurality of content sources 12, 14 over a communications network 24 and schedules data transmission from the content sources 12, 14 to one or more replicated servers 16, 18, 20. In general, the scheduler 10 determines whether data transmission from one or more of **the content sources 12, 14** to one or more of the replicated servers 16, 18, 20 can be completed over the communications network 24 by a delivery time requested by the content sources 12, 14. In accordance with the invention, the transmission from the content sources 12, 14 to the replicated servers 16, 18, 20 is preferably a multicast transmission. As further described below, the scheduler 10 makes the transmission*

determination based on such parameters as the bandwidth available for data transmission over the communications network 24, the time available for transmission to be completed by the requested delivery time, the amount or size of the data to be delivered by the requested delivery time, the availability of multicast addresses, and the transmission priority levels accorded to the content sources 12, 14. Data delivered to the replicated servers 16, 18, 20, can be retransmitted to one or more subscribers 22_1, 22_2, 22_3, . . . 22_N *of the content sources 12, 14 over further communications networks 26, 28, See Miller, col. 4, lines 34-59).*

Times of Applicants equates to the time available for transmission to be completed by the requested delivery time of Miller, col. 4, lines 34-59 *(i.e. Referring to FIG. 1, in accordance with the invention, a network resource scheduler 10 (hereinafter "scheduler") communicates with a plurality of content sources 12, 14 over a communications network 24 and schedules data transmission from the content sources 12, 14 to one or more replicated servers 16, 18, 20. In general, the scheduler 10 determines whether data transmission from one or more of the content sources 12, 14 to one or more of the replicated servers 16, 18, 20 can be completed over the communications network 24 by a delivery time requested by the content sources 12, 14. In accordance with the invention, the transmission from the content sources 12, 14 to the replicated servers 16, 18, 20 is preferably a multicast transmission. As further described below, the scheduler 10 makes the transmission determination based on such parameters as the bandwidth available for data transmission over the communications network 24,* ***the time available for transmission to be completed by***

***the requested delivery time**, the amount or size of the data to be delivered by the requested delivery time, the availability of multicast addresses, and the transmission priority levels accorded to the content sources 12, 14. Data delivered to the replicated servers 16, 18, 20, can be retransmitted to one or more subscribers* 22_1, 22_2, 22_3, . . . 22_N *of the content sources 12, 14 over further communications networks 26, 28, See Miller, col. 4, lines 34-59)*.

The term "transferred immediately" and "transferred overnight" of Applicants equates to transmission priority levels accorded to the content sources 12, 14 of Miller, col. 4, lines 34-59 *(i.e. Referring to FIG. 1, in accordance with the invention, a network resource scheduler 10 (hereinafter "scheduler") communicates with a plurality of content sources 12, 14 over a communications network 24 and schedules data transmission from the content sources 12, 14 to one or more replicated servers 16, 18, 20. In general, the scheduler 10 determines whether data transmission from one or more of the content sources 12, 14 to one or more of the replicated servers 16, 18, 20 can be completed over the communications network 24 by a delivery time requested by the content sources 12, 14. In accordance with the invention, the transmission from the content sources 12, 14 to the replicated servers 16, 18, 20 is preferably a multicast transmission. As further described below, the scheduler 10 makes the transmission determination based on such parameters as the bandwidth available for data transmission over the communications network 24, the time available for transmission to be completed by the requested delivery time, the amount or size of the data to be delivered by the requested delivery time, the availability of multicast addresses, and **the***

transmission priority levels accorded to the content sources 12, 14*. Data delivered to the replicated servers 16, 18, 20, can be retransmitted to one or more subscribers* 22_1, 22_2, 22_3, . . . 22_N *of the content sources 12, 14 over further communications networks 26, 28, See Miller, col. 4, lines 34-59).*

Trigger transfer of the data of Applicants equates to the time to begin data transmission and the rate at which to transmit the data *(i.e. The network resource scheduler then sends to each requesting content source (i) the time to begin data transmission and (2) the rate at which to transmit the data, See Miller, col. 3, lines 54-62).*

The term "evaluating" of Applicants equates to determination of Miller, col. 4, lines 34-59 *(i.e. the scheduler 10 makes the transmission determination based on such parameters as the bandwidth available for data transmission over the communications network 24, the time available for transmission to be completed by the requested delivery time, the amount or size of the data to be delivered by the requested delivery time, the availability of multicast addresses, and the transmission priority levels accorded to the content sources 12, 14, Miller, col. 4, lines 34-59).*

The teaching of Miller implies the file extension as criterion *(i.e. The priority level for each content source 12, 14 is assigned based on some criterion, See Miller, col. 6, lines 52-59).*

Carmel, Miller, Takeuchi does not state the term "file extension".

F**ile extension** of Applicants (recited in the dependent claims 26, 27) is taught by Knox *(i.e. In this step, the process 40 can execute a computer process that is capable*

of analyzing the contents of the uploaded data file. For example, the file structure of the uploaded data file may be known to the process and may be identified to that process by ***the file extension associate with the uploaded file****. For example, a *.rm file indicates a file format compatible with the Real Media file structure. The process 40 can include logic that understands the file structure of the *.rm format. The file structure typically includes information regarding the title of the file, the size of the file, an associated codec, bit rate and other characteristics of that file, See Knox, [0043])*, and by Quinet *(i.e. [0065] The object does not have a priority yet, but* ***the file extension*** *looks like HTML (".HTML",".HTM") or XML (".XML") or looks like a directory index (ends"/"). Such a priority assignment ensures that a HTML page requested from the bookmarks or typed in directly will be requested with* ***a high priority****, See Quinet, [0065])*.

For the reasons set forth above, the claimed invention as represented in the claims does not represent a patentable over the art of record.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Miranda Le whose telephone number is (571) 272-4112. The examiner can normally be reached on Monday through Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James K. Trujillo, can be reached at (571) 272-3677. The fax number to this Art Unit is (571)-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Miranda Le/

Primary Examiner, Art Unit 2159